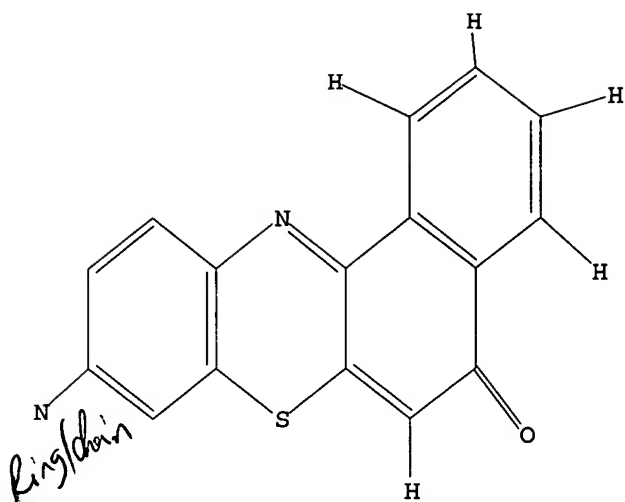


EAST Search History

| Ref # | Hits | Search Query | DBs | Default Operator | Plurals | Time Stamp |
|-------|------|--------------|--------------------|------------------|---------|------------------|
| L1 | 62 | 544/31 | US-PGPUB; USPAT | OR | OFF | 2006/06/09 13:07 |

✓ Ring not isolated



Structure attributes must be viewed using STN Express query preparation.

=> s l1

SAMPLE SEARCH INITIATED 13:18:20 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 19 TO ITERATE

100.0% PROCESSED 19 ITERATIONS 1 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 119 TO 641
PROJECTED ANSWERS: 1 TO 80

L2 1 SEA SSS SAM L1

=> s l1 sss full

FULL SEARCH INITIATED 13:18:26 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 483 TO ITERATE

100.0% PROCESSED 483 ITERATIONS 2 ANSWERS
SEARCH TIME: 00.00.01

L3 2 SEA SSS FUL L1

=> file caplus

COST IN U.S. DOLLARS

| SINCE FILE | TOTAL |
|------------|---------|
| ENTRY | SESSION |
| 166.94 | 167.15 |

FULL ESTIMATED COST

FILE 'CAPLUS' ENTERED AT 13:18:31 ON 09 JUN 2006
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=> s l3

L4 5 L3

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L4 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN

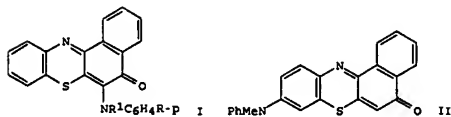
ACCESSION NUMBER: 2003:591159 CAPLUS
 DOCUMENT NUMBER: 139:157136
 TITLE: Nile red type compound emitting red light, process for producing the same, and luminescent element utilizing the same
 INVENTOR(S): Nakaya, Tadao; Tajima, Akio; Saikawa, Tomoyuki; Takeno, Shinji; Yamauchi, Takao; Mori, Hidemasa
 PATENT ASSIGNEE(S): Taiho Industries, Co. Ltd., Japan
 SOURCE: PCT Int. Appl., 112 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|------------|
| WO 2003062213 | A1 | 20030731 | WO 2003-JP477 | 20030121 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, BG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| JP 2003277371 | A2 | 20031002 | JP 2002-14881 | 20020123 |
| JP 2004018400 | A2 | 20040122 | JP 2002-172127 | 20020612 |
| JP 2003277369 | A2 | 20031002 | JP 2003-12498 | 20030121 |
| EP 1475372 | A1 | 20041110 | EP 2003-701142 | 20030121 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK | | | | |
| CN 1620441 | A | 20050525 | CN 2003-802508 | 20030121 |
| US 2005113575 | A1 | 20050526 | US 2003-501398 | 20030121 |
| PRIORITY APPLN. INFO.: | | | JP 2002-12222 | A 20020121 |
| | | | JP 2002-12224 | A 20020121 |
| | | | JP 2002-14881 | A 20020123 |
| | | | JP 2002-172127 | A 20020612 |
| | | | JP 2001-313245 | A 20011010 |
| | | | WO 2003-JP477 | W 20030121 |

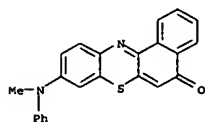
OTHER SOURCE(S): MARPAT 139:157136
 GI

L4 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN

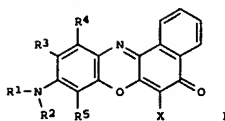
ACCESSION NUMBER: 1985:406289 CAPLUS
 DOCUMENT NUMBER: 103:6289
 TITLE: Study of the chemistry of heterocyclic quinonimines. 6. Direct amination of benzo[a]phenothiazin-5-one by aromatic amines
 AUTHOR(S): Afanas'eva, G. B.; Vysokov, V. I.; Chupakhin, O. N.; Ufimskaya, I. S.
 CORPORATE SOURCE: Ural. Politekhn. Inst., Sverdlovsk, 620002, USSR
 SOURCE: Khimiya Geterotsiklichesikh Soedinenii (1985), (1), 49-52
 CODEN: KGSSAQ; ISSN: 0453-8234
 DOCUMENT TYPE: Journal
 LANGUAGE: Russian
 OTHER SOURCE(S): CASREACT 103:6289
 GI



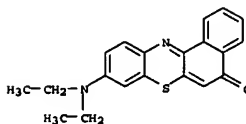
AB Benzophenothiazinones I (R = H, Cl, Br, OMe, Me, R1 = H; R = H, R1 = Me, Et) were prepared from benzo[a]phenothiazin-5-one by amination with p-RC6H4NHR1 in DMF containing concentrated HCl for 30 h; I (R = H, R1 = Me) was also obtained by treating 2-chloro-3-(N-methylanilino)-1,4-naphthoquinone with the Zn salt of o-aminophenol. Addnl. obtained was benzophenothiazinone II.
 IT 96691-46-2P
 RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of)
 RN 96691-46-2 CAPLUS
 CN 5H-Benzo[a]phenothiazin-5-one, 9-(methylphenylamino)- (9CI) (CA INDEX NAME)



L4 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



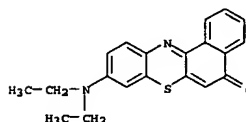
AB The invention relates to a Nile red-based red-emitting compound represented by I [R1-2 = H and alkyl; R3(R5) = H and may combine with R1(R2) to form a ring; R4 = H and may combine with R3 to form a ring; X = H, halo, and -CH(CN)Ar]. The compound is suited for use as a red-emitting material in an organic light emitting device.
 IT 74682-48-7P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (nile red type compound for red-emitting organic LED)
 RN 74682-48-7 CAPLUS
 CN 5H-Benzo[a]phenothiazin-5-one, 9-(diethylamino)- (9CI) (CA INDEX NAME)



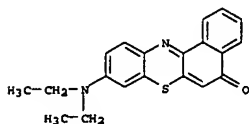
REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE
 FORMAT

L4 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1984:195085 CAPLUS
 DOCUMENT NUMBER: 100:195085
 TITLE: Dyestuff lasers and light collectors - two new fields of application for fluorescent heterocyclic compounds
 AUTHOR(S): Raue, Roderich; Harnisch, Horst; Drexhage, Karl H.
 CORPORATE SOURCE: Bayer A.-G., Leverkusen, D-5090, Fed. Rep. Ger.
 SOURCE: Heterocycles (1984), 21(1), 167-90
 CODEN: HETCYM; ISSN: 0385-5414
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB Phys. principles and methods of the functioning of fluorescent solar collectors and dye lasers are discussed, together with the demands that have to be met by a fluorescent dye. A report is given of perylene carboxylic ester dyes and perylene tetracarboxylic acid diimide dyes for solar collectors, bifluorophoric laser dyes, laser dyes with intramol. triplet quenching, and IR dyes with pyrylium and thiopyrylium terminal systems, also from the tetra and hexamethine hemicyanine ranges. The effect of cyanogen substitution on the fluorescence quantum yield in coumarin and xanthene dyes was studied. Among the coumarin dyes are compds. suitable as energy converters in light-collecting systems, especially if the amino group is fixed by ring closure to the aromatic system as high-power laser dyes.
 IT 74682-48-7
 RL: USES (Uses) (for lasers and solar collectors, properties of)
 RN 74682-48-7 CAPLUS
 CN 5H-Benzo[a]phenothiazin-5-one, 9-(diethylamino)- (9CI) (CA INDEX NAME)



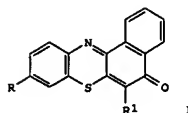
L4 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 1982:53801 CAPLUS
 DOCUMENT NUMBER: 96:53801
 TITLE: Oxidative coupling of CH-acid compounds with p-phenylenediamines. VIII. Synthesis of 5H-benzo[a]phenothiazin-5-ones from naphth[2,1-d]-1,3-oxathiol-2-ones
 AUTHOR(S): Mann, G.; Wilde, H.; Hauptmann, S.; Lehmann, J.; Naumann, M.; Lepom, P.
 CORPORATE SOURCE: SEKT. CHEM., KARL-MARX-UNIV., LEIPZIG, GER. DEM. REP.
 SOURCE: Journal fuer Praktische Chemie (Leipzig) (1981), 323(5), 785-92
 CODEN: JPCEAO; ISSN: 0021-8383
 DOCUMENT TYPE: Journal
 LANGUAGE: German
 OTHER SOURCE(S): CASREACT 96:53801
 AB Reaction of 5-hydroxynaphth[2,1-d]-3-oxathiol-2-ones with N,N-diethylquinone-1,4-diimines gives 5H-benzo[a]phenothiazin-5-ones.
 The same dyes are available by use of p-substituted nitrosobenzenes in HOAc, or in MeOH in the presence of O acceptors. The mechanisms of dye formation are discussed.
 IT 74682-48-7P
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (preparation and spectra of)
 RN 74682-48-7 CAPLUS
 CN 5H-Benzo[a]phenothiazin-5-one, 9-(diethylamino)- (9CI) (CA INDEX NAME)



L4 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 1980:515943 CAPLUS
 DOCUMENT NUMBER: 93:115943
 TITLE: Thiazine dyes
 INVENTOR(S): Mann, Gerhard; Hauptmann, Siegfried; Wilde, Horst; Lehmann, Joachim; Naumann, Manfred
 PATENT ASSIGNEE(S): Ger. Dem. Rep.
 SOURCE: Ger. (East), 9 pp.
 CODEN: GEXXAS
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|-------------|
| DD 139269 | Z | 19791219 | DD 1978-208539 | 19781019 |
| PRIORITY APPLN. INFO.: | | | DD 1978-208539 | AI 19781019 |

GI



AB Thiazines I (R = auxochromic group; R1 = alkyl, aryl, acyl, optionally substituted heterocyclic group, substituted mercapto or amino), hydrolysis-resistant magenta dyes showing no secondary absorption in the 400-500 nm range, are prepared by reaction of a 5-hydroxynaphth[2,1-d]-1,3-oxathiol-2-one derivative or its 4-substituted analog with a p-nitroso-N,N-dialkylaniline in the presence of an oxygen acceptor or with a dialkyl-p-phenylenediamine under oxidative conditions. Typical of the dyes prepared are I (R = Et2N, R1 = H) [74682-48-7], λ_{max} 560 nm, $\log \epsilon$ 4.38, and I (R = Et2N, R1 = PhN(H)CO) [74682-49-8], λ_{max} 600 nm, $\log \epsilon$ 4.71. Four other I were prepared.
 IT 74682-48-7P
 RL: IMF (Industrial manufacture); PREP (Preparation) (photog. dye, preparation and spectrum of)
 RN 74682-48-7 CAPLUS
 CN 5H-Benzo[a]phenothiazin-5-one, 9-(diethylamino)- (9CI) (CA INDEX NAME)

L4 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

